

REMARKS

I. Status of the Application

Claims 1-15 are pending in the application. Claims 3 and 11 stand rejected under 35 U.S.C. § 112 as having insufficient antecedent basis. Claims 1-6 and 9-13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 7,029,784 to Carlstrom ("Carlstrom") in view of U.S. Pre-Grant Publication No. 2002/0022170 to Franklin et al. ("Franklin") and further in view of U.S. Patent No. 4,877,693 to Baker ("Baker"). Claims 7, 8, 14 and 15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Carlstrom, Franklin, and Baker as applied to claims 1 and 9 and further in view of U.S. Patent No. 6,007,933 to Jones ("Jones").

Claims 1, 3, 9 and 11 have been amended. Claims 3 and 11 have been amended in non-limiting fashion to correct a typographical error, namely to replace "seal" with "edge."

Applicants respectfully request reconsideration of claims 1-15 in view of the foregoing amendments and following remarks. Each of the Examiner's rejections is addressed below.

II. Claims 3 and 11 now have Appropriate Antecedent Basis

Claims 3 and 11 have been amended to replace "seal" with "edge." Appropriate antecedent basis for "second edge" exists from claim 1 and claim 9. Support for the amendment is found at least at page 5, line 29 and page 6, line 1. Applicants respectfully submit that claims 3 and 11 comply with 35 U.S.C. § 112 and that the objection is therefore overcome.

III. The Claims are Non-Obvious over Carlstrom in view of Franklin and in Further view of Baker

Claims 1-6 and 9-13 stand rejected under 35 U.S.C. § 103(a) over Carlstrom in view of Franklin and Baker. This rejection is respectfully traversed.

Carlstrom teaches a flow field plate with two interlocking layers having lands that form internal channels therebetween. Franklin is cited as disclosing a single or multiple manifold(s) for the delivery and removal of reactants and reactant products to and from a separator plate. Baker is cited as disclosing the passage of fuel through fuel chambers that are coupled to entry ports of anode chambers.

Carlstrom does not disclose or make obvious a fuel cell bipolar plate including a first plate having a plurality of ribs on a first surface of the first plate, and a second plate having a plurality of ribs on a second surface of the first plate, the ribs of the second plate having a height greater than a height of the ribs of the first plate such that the second plate can be nested with the first plate so as to define a plurality of center flow channels extending between the first and second plates.

The lands of Carlstrom on each of the two layers are of the same height. The internal channels of the layers of Carlstrom are formed by offsetting the layers laterally with respect to one another, not with the lands of the two layers having differing heights.

Franklin and Baker each fail to overcome the deficiencies of Carlstrom noted above. Neither Franklin nor Baker disclose or make obvious plates with ribs of differing heights that nest with one another to define a plurality of center flow channels.

Since this required limitation of independent claims 1 and 9 is not found in any of Carlstrom, Franklin, or Baker, alone or in combination, the rejection is improper and should be withdrawn.

IV. Claims 7, 8, 14 and 15 are Non-Obvious over Carlstrom, Franklin et al., and Baker in view of Jones

Claims 7, 8, 14 and 15 have been rejected under 35 U.S.C. § 103(a) over Carlstrom, Franklin, Baker, and Jones. Jones is cited as disclosing wires disposed between a bipolar plate

and electrode to distribute reactants and products and to provide deformability and resiliency in the cell. This rejection is respectfully traversed.

For the reasons stated above, the Examiner's combination of Carlstrom, Franklin, and Baker fails to teach or suggest the subject matter of claims 1 and 9, and Jones fails to cure the deficiencies of these references. Jones simply does not disclose plates with ribs of differing heights that nest with one another to define a plurality of center flow channels. Consequently, the rejection is improper and should be withdrawn.

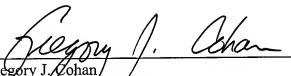
V. Conclusion

Reconsideration and allowance of all the pending claims is respectfully requested. If a telephone conversation with Applicants' attorney would expedite prosecution of the above-identified application, the Examiner is urged to call the undersigned at (617) 720-9600.

Respectfully submitted,

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